

Application No. : 10/627,942
Filed : July 25, 2003

IN THE CLAIMS

Please amend Claims 1, 5, 15, 19, 35, 41, and 45, and add new Claims 48-56 as follows:

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1. (Currently amended) An electronics assembly comprising:
at least one electronics element, said at least one element having at least one circuit
disposed thereon; and

10 a structure adapted to receive said at least one electronics element and retain said at least
one element in a substantially fixed position;

15 said structure further comprising at least one backplane element adapted to electrically
communicate with said at least one electronics element,

20 said backplane element having a plurality of ports for electrical communication with other
electronic devices, said plurality of ports comprising a port of a first type and a port of a second
type, said first type and said second type each having different electrical interface configurations;
wherein said at least one backplane element comprises a substantially unitary and
removable component from said assembly; and

25 wherein said assembly is further adapted to accommodate a varying number of said
electronics elements and respective ones of said backplane elements according to the configuration
desired by the user.

2. (Original) The assembly of Claim 1, wherein said plurality of ports comprises at least
one pigtail connector.

3. (Original) The assembly of Claim 1, wherein said one electronics element comprises a
substrate having at least one circuit disposed nonlinearly on opposing sides.

25 4. (Original) The assembly of Claim 1, wherein said assembly is used in a DSL system,
and said backplane element comprises:

a first port adapted to interface electrically with a POTS entity; and
a second port adapted to electrically interface with a DSLAM.

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5. (Currently amended) The assembly of Claim 1, wherein said at least one electronics element is configured to substantially separate a plurality of electrical circuits disposed thereon.

6. (Original) The assembly of Claim 1, wherein said at least one circuit comprises one or 5 more DSL splitter circuits.

7. - 14. (Cancelled)

15. (Currently amended) A backplane element, comprising:
a first multi-terminal connector disposed substantially juxtaposed to a second multi-terminal connector;

10 a connector cable, said cable electrically mated to a pigtail connector;
a third multi-terminal connector adapted to interface that interfaces with terminals of an electronics insert element associated with said backplane element; and
an interface element disposed electrically between said third connector and said first, second, and pigtail connectors;

15 wherein said first multi-terminal connector, said second multi-terminal connector, and said pigtail connector are all substantially disposed on a common side of said interface element.

16. (Previously presented) The backplane element of Claim 15, wherein:
said first multi-terminal connector is adapted for use as a plain old telephone system (POTS) signal interface;
20 said second multi-terminal connector is adapted for use as an outside plant interface; and
said pigtail connector is adapted to provide electrical communication with a DSL access multiplexer (DSLAM).

25 17. (Original) The backplane element of Claim 15, further comprising a plurality of capacitive elements disposed proximate said backplane element, said capacitive elements adapted to provide the high-pass filter functionality.

18. (Original) The backplane element of Claim 17, wherein said interface element comprises a substantially flexible substrate having a plurality of electrical traces formed thereon.

30 19. (Currently amended) A backplane assembly, comprising:
a first electrical connector with a first electrical interface configuration;
a first substrate adapted to receive at least part of said first connector;

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a plurality of second electrical connectors, said plurality of second electrical connectors each having a second electrical interface configuration, said second electrical interface configuration being different than said first electrical interface configuration;

a second substrate adapted to receive at least a portion of each of said second connectors;

5 structure components maintaining said first and second substrates in substantially fixed relationship; and

an electrical interface disposed substantially between said first and second substrates;

wherein said electrical interface provides electrical connection between said first connector and at least a portion of said second connectors;

10 wherein said backplane assembly comprises a substantially unitary and removable component from said housing assembly.

20. (Original) The backplane assembly of Claim 19, wherein said electrical interface comprises a flexible substrate having conductive traces disposed along its surfaces and propagating between corresponding termination points for said first and second substrates.

15 21. - 34. (Cancelled)

35. (Currently amended) An electronics assembly comprising:

a plurality of electronics elements each having at least one circuit disposed thereon; and
a structure adapted to receive said electronics elements and retain said elements in a substantially fixed position;

20 said structure further comprising a plurality of backplane elements adapted to electrically communicate with respective ones of said electronics elements,

 said backplane elements having a plurality of ports for electrical communication with other electronic devices, said plurality of ports comprising a first port type and a second port type, said first port type and said second port type each having different electrical interface configurations;

25 wherein said plurality of backplane elements each comprise a substantially unitary and removable component from said electronics assembly; and

 wherein said assembly is further adapted to accommodate a varying number of said plurality of electronics elements and respective ones of said backplane elements ~~according to a configuration desired by the user, said assembly being substantially user-configurable to achieve said desired configuration.~~

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36. (Previously presented) The assembly of Claim 35, wherein said plurality of ports comprises at least one pigtail connector.

37. (Previously presented) The assembly of Claim 36, wherein at least a portion of said plurality of electronics elements comprise a substrate having at least one circuit disposed 5 nonlinearly on opposing sides.

38. (Previously presented) The assembly of Claim 36, wherein said assembly is used in a DSL system, and said backplane elements each comprise:

a first port adapted to interface electrically with a POTS entity; and
a second port adapted to electrically interface with a DSLAM.

39. (Previously presented) The assembly of Claim 35, wherein said electronics elements are configured to substantially separate a plurality of electrical circuits disposed thereon.

40. (Previously presented) The assembly of Claim 35, wherein said at least one circuit comprises one or more DSL splitter circuits.

41. (Currently amended) A backplane element, comprising:

a first multi-terminal connector disposed substantially proximate to a second multi-terminal connector;

a connector cable, said cable electrically mated to a connector disposed on a distal end of said cable;

20 a third multi-terminal connector adapted to interface that interfaces with terminals of an electronics insert element associated with said backplane element; and

an interface element disposed electrically between said third connector and said first, second, and cable-mounted connectors;

wherein said connector disposed on said distal end of said cable does not mate with any of said first, second, and third multi-terminal connectors.

42. (Previously presented) The backplane element of Claim 41, wherein:

said first multi-terminal connector is adapted for use as a plain old telephone system (POTS) signal interface;

said second multi-terminal connector is adapted for use as an outside plant interface; and
said cable-mounted connector is adapted to provide electrical communication with a DSL

30 access multiplexer (DSLAM).

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43. (Previously presented) The backplane element of Claim 41, further comprising a plurality of capacitive elements disposed proximate said backplane element, said capacitive elements adapted to provide the high-pass filter functionality.

5 44. (Previously presented) The backplane element of Claim 43, wherein said interface element comprises a substantially flexible substrate having a plurality of electrical traces formed thereon.

10 45. (Currently amended) A backplane assembly, comprising:
a first electrical connector with a first type of electrical interface configuration;
a first substrate adapted to be in electrical communication with said first connector;
a plurality of second electrical connectors; said plurality of second electrical connectors each having a second type of electrical interface configuration; wherein said second type of electrical interface configuration is different than said first type of electrical interface configuration;

15 a second substrate adapted to be in electrical communication with each of said second connectors;

structure components maintaining said first and second substrates in substantially fixed relationship; and

20 an electrical interface disposed substantially between said first and second substrates;
wherein said electrical interface provides electrical connection between said first connector and at least a portion of said second connectors; and
wherein said backplane assembly comprises a substantially unitary and removable component from said housing assembly.

25 46. (Previously presented) The backplane assembly of Claim 45, wherein said electrical interface comprises a flexible substrate having conductive traces disposed along its surfaces and propagating between corresponding termination points for said first and second substrates.

47. (Cancelled)

30 48. (New) An electronics assembly comprising:
a structure adapted to receive at least one electronics element and retain said at least one element in a substantially fixed position;

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said structure further comprising at least one backplane element adapted to electrically communicate with said at least one electronics element;

5 said backplane element having a plurality of ports for electrical communication with other electronic devices, said plurality of ports comprising a port of a first port type and a port of a second port type; said first port type and said second port type each having different electrical interface configurations;

wherein said at least one backplane element comprises a substantially unitary and removable component from said assembly; and

10 wherein said assembly is further adapted to accommodate a varying number of said electronics elements and respective ones of said backplane elements.

49. (New) The assembly of Claim 48, wherein said plurality of ports comprises at least one pigtail connector.

50. (New) The assembly of Claim 48, wherein said at least one electronics element comprises a substrate having at least one circuit disposed nonlinearly on opposing sides.

15 51. (New) The assembly of Claim 48, wherein said assembly is used in a DSL system, and said backplane element comprises:

a first port adapted to interface electrically with a POTS entity; and
a second port adapted to electrically interface with a DSLAM.

20 52. (New) The assembly of Claim 48, wherein said at least one electronics element is configured to substantially separate a plurality of electrical circuits disposed thereon.

53. (New) The assembly of Claim 48, wherein said at least one circuit comprises one or more DSL splitter circuits.

54. (New) A backplane element, comprising:

25 a connector cable, said cable electrically mated to a pigtail connector; said pigtail connector adapted to provide electrical communication with a DSL access multiplexer; and
a multi-terminal connector that interfaces with terminals of an electronics insert element associated with said backplane element;

30 wherein said backplane element is adapted to connect to a housing assembly; and
said backplane element comprises a substantially unitary and removable component from said housing assembly.

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55. (New) The backplane element of Claim 54, further comprising a plurality of capacitive elements disposed proximate said backplane element, said capacitive elements adapted to provide the high-pass filter functionality.

56. (New) A backplane element, comprising:

5 a first multi-terminal connector disposed substantially juxtaposed to a second multi-terminal connector;

a connector cable, said cable electrically mated to a pigtail connector;

a third multi-terminal connector that interfaces with terminals of an electronics insert element associated with said backplane element; and

10 an interface element disposed electrically between said third connector and said first, second, and pigtail connectors;

wherein said first multi-terminal connector, said second multi-terminal connector, and said pigtail connector are all substantially disposed on a common side of said interface element; and

15 wherein said pigtail connector does not mate with any of said first, second, and third multi-terminal connectors.